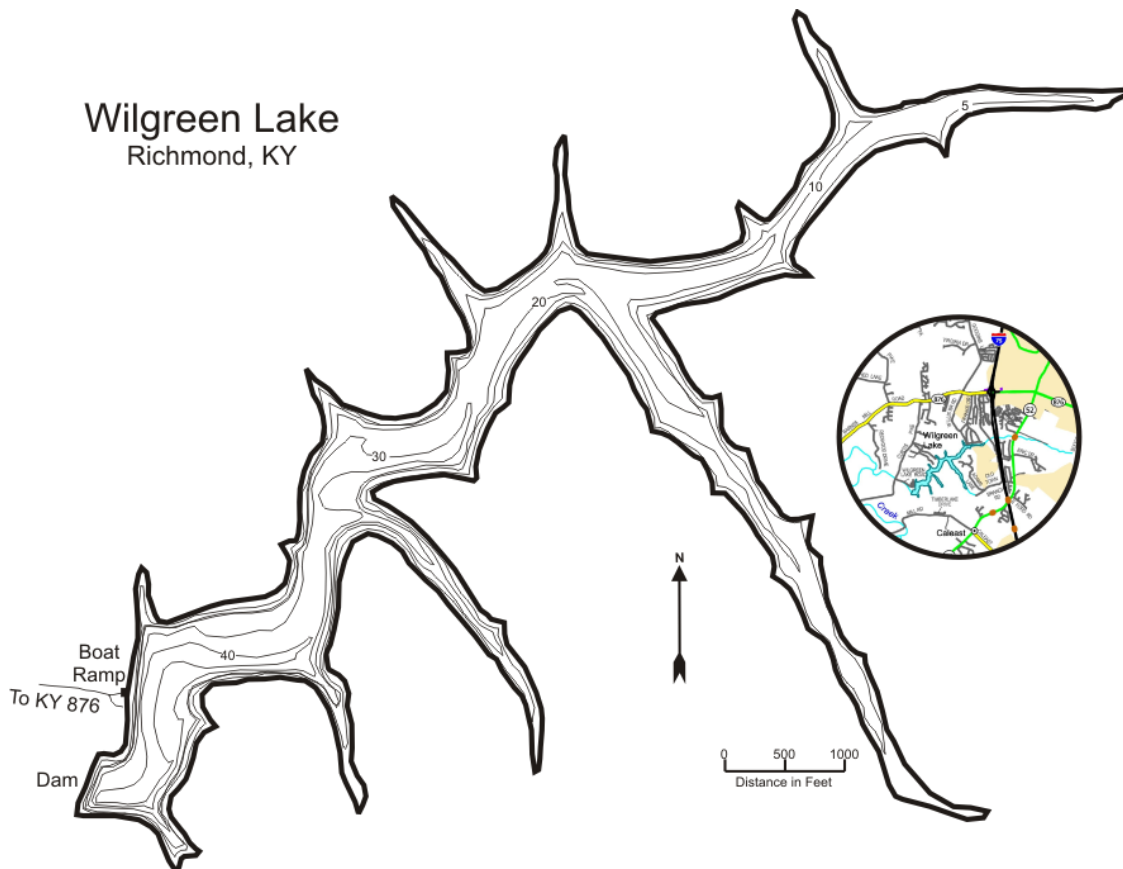


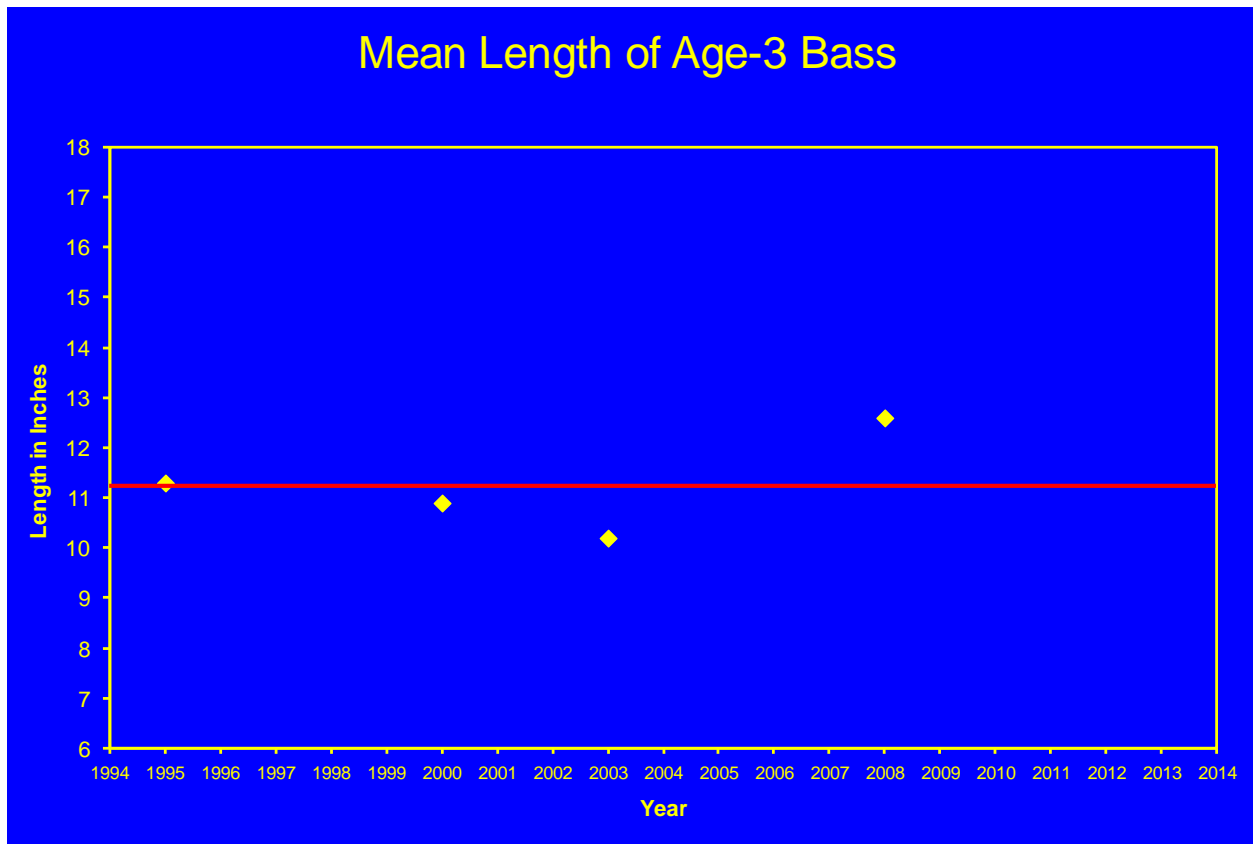
Wilgreen Lake Bass Assessment 2013

Wilgreen Lake (also called Taylor Fork Lake or Taylor Valley Lake) is a 169 acre reservoir located about 2 miles to the west of Richmond in Madison County. It was created in 1966 on Taylor Fork, a tributary to Silver Creek. The primary use of the drainage surrounding the lake is agriculture; however it is being encroached upon by urban development. It is a popular destination for anglers fishing for largemouth bass, channel catfish, sunfish species (namely bluegill and redear sunfish) and crappie. Please see "Understanding the Largemouth Bass Assessment" article for an explanation of how the assessment works. *Please note there are no specific regulations on Wilgreen Lake, it falls under the "Statewide Regulations" category of a minimum size limit of 12.0 inches and 6 fish daily creel limit for largemouth bass.* Lake Wilgreen was not sampled in 2013, but is slated to be revisited in 2014.



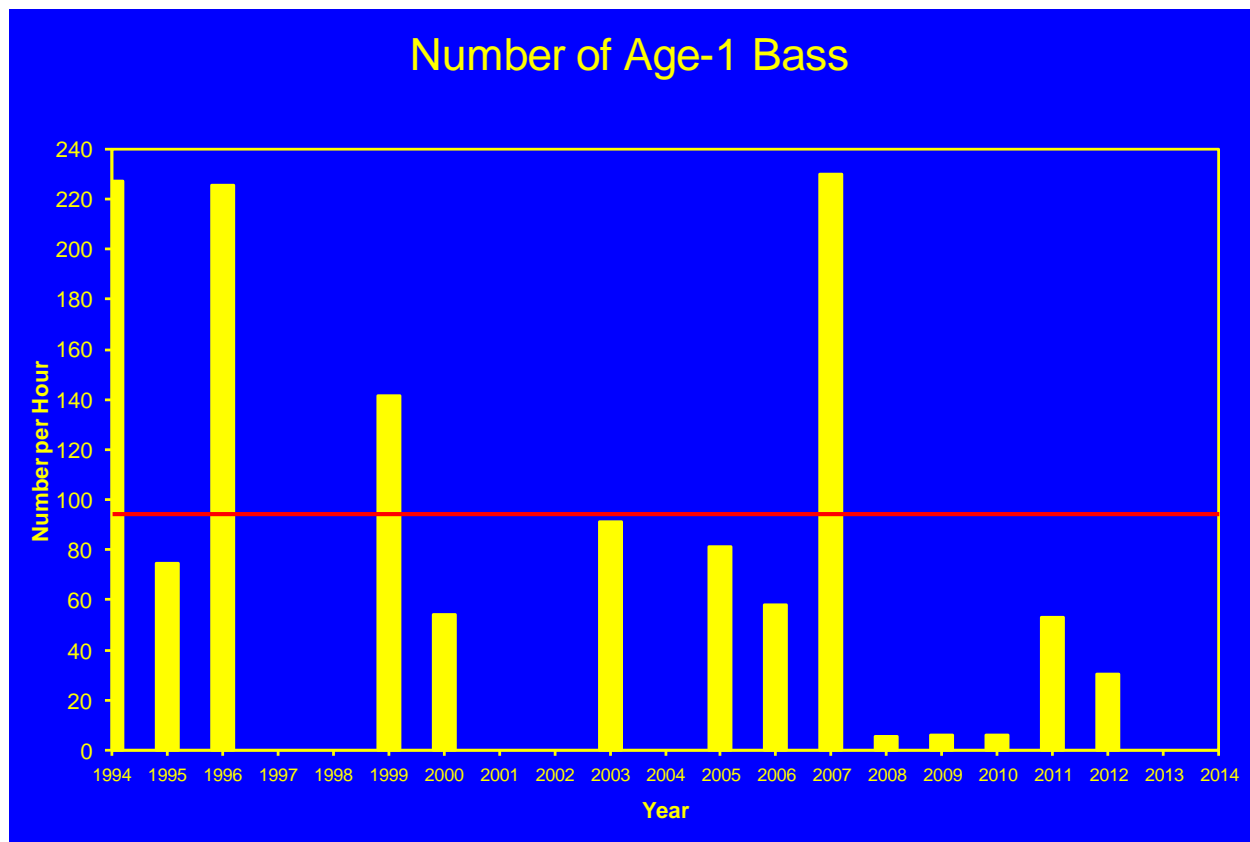
Parameter 1 – Length at age-3 (growth rate)

At Wilgreen Lake the length of bass at age 3 has averaged 11.25 inches since 1993, which is considered to be good when compared to other lakes of its size in Kentucky. After hovering around 11.0 inches from 1995 to 2003, the length of age 3 fish jumped to 12.8 inches in 2008 which is considered to be excellent. Growth rates are generally related to factors such as population density, food resources and weather patterns. The last year that KDFWR aged largemouth bass at the lake was 2008.



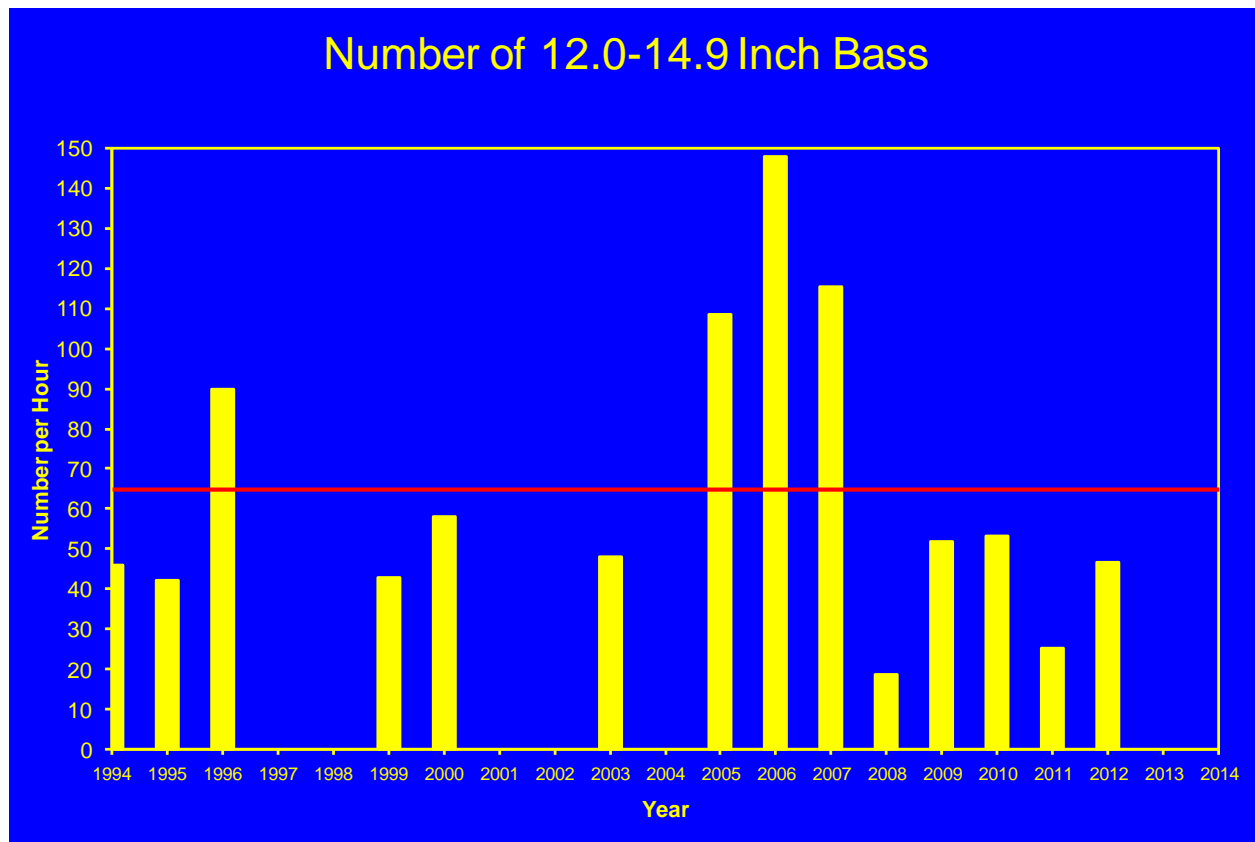
Parameter 2 – Numbers of age-1 bass (how good the spawn was)

KDFWR looks at the catch rates of age-1 largemouth bass to assess the success of the spawn which occurred in the prior year. This is an important parameter because the number of bass produced represents how good the fishing will be once these fish grow large enough for anglers to catch. In Wilgreen Lake, the catch of age-1 bass has averaged 96.33 fish captured per hour (f/h) since 1991. This is excellent for lakes of this size in Kentucky. Since 2008, these numbers have been well below the 15 year average for the lake with values in the poor range from 2008 – 2010 and back into the good range in 2011 and 2012. These low numbers could be related to competition of these young fish with the high numbers of gizzard shad within the lake. Both fish at smaller sizes will eat the same food source, and if the gizzard shad out-compete the largemouth bass, this will result in poor survival of age-1 largemouth bass, lowering these numbers. It should be noted that 2007 was the first year gizzard shad were observed in the lake.



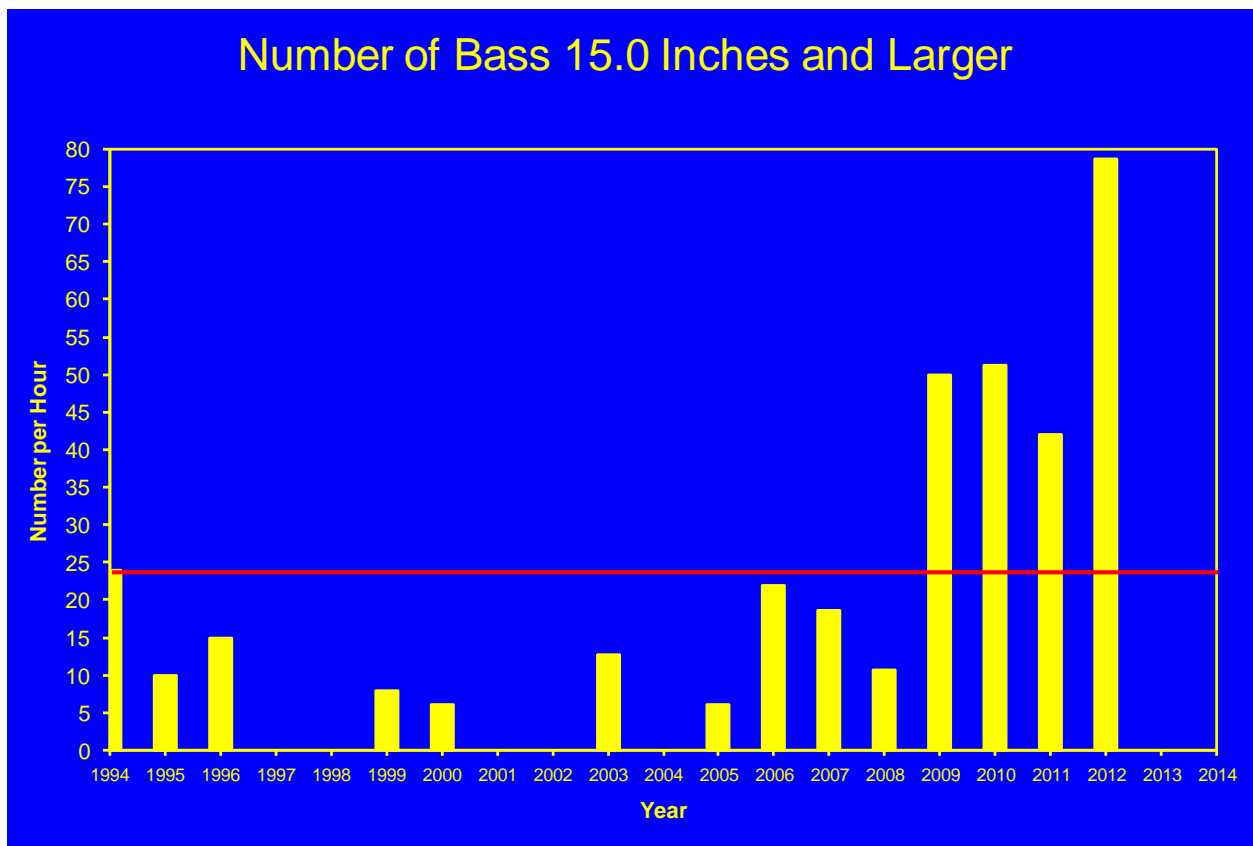
Parameter 3 – Numbers of 12.0-14.9 inch bass

The electrofishing catch of 12.0 – 14.9 inch largemouth bass has averaged 64.02 f/h since 1991; this is considered to be excellent for lakes of this size. From 2005 to 2007, these numbers were well above average and this was probably related to the excellent spawns of 2003 and 2005. The higher spawn of 2007 resulted in a moderate increase of catches of 12.0 – 14.9 inch largemouth bass in 2009 and 2010. However, these values were still below the mean since 1993 and could be attributed to drought conditions or (more likely) poor recruitment. Lending credence to the theory of poor recruitment, in addition to the lowered catches of age-1 fish from 2008 to present, catch rates were also lower for 8.0 – 11.9 inch fish, which is the link between age-1 and catch rates of 12.0 – 14.9 inch fish.



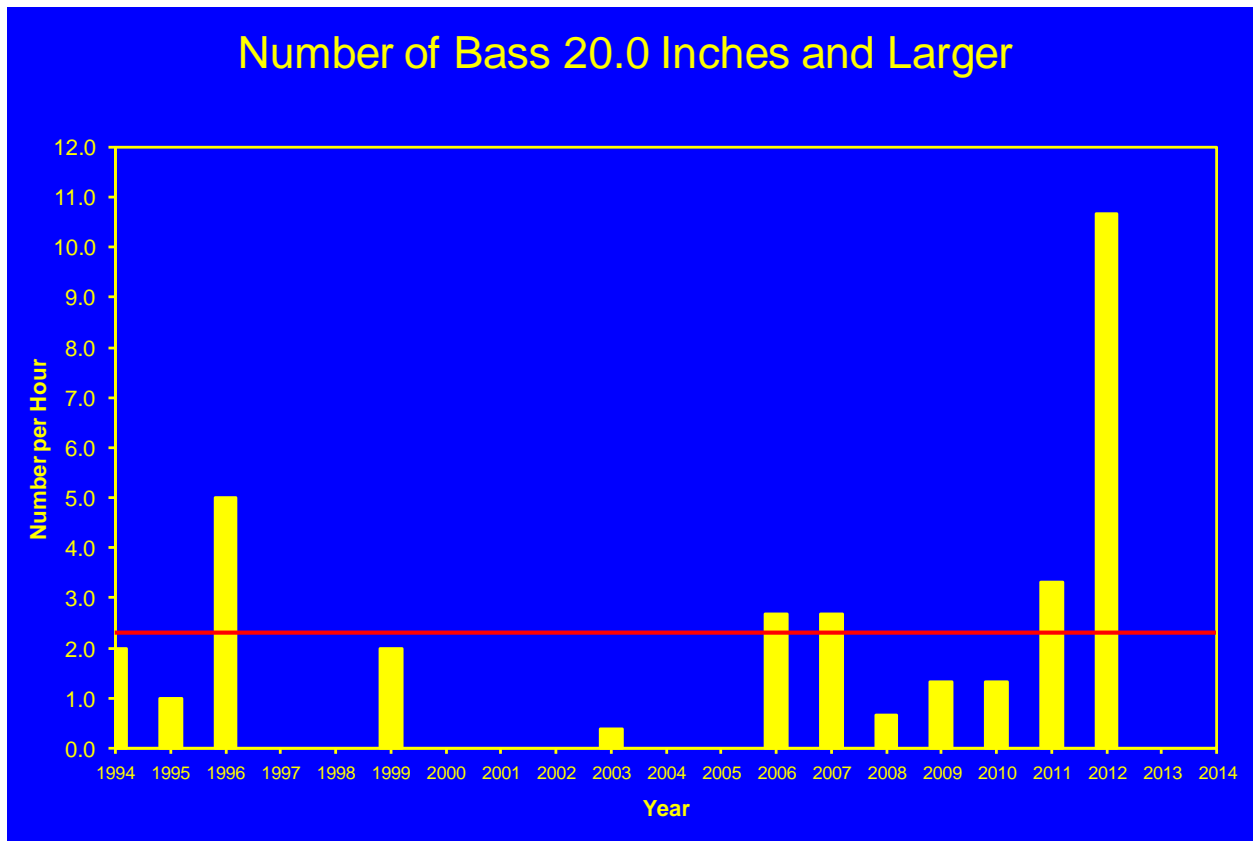
Parameter 4 – Numbers of 15.0 inch and larger bass

The electrofishing catch rate of 15.0 inch and larger largemouth bass has averaged 23.28 f/h since 1991, which is considered to be good for lakes of this size. Since 2009, this number has consistently been higher than the mean, ranging from 42.00 – 78.67 f/h which is excellent. The higher catch rates could be a reflection of the high numbers of 12.0-15.0 inch fish that were present from 2005 to 2007. If this were the case, numbers of 15.0 inch and larger bass may decrease in the coming years due to the low number of 12.0-15.0 inch bass from 2008-present. However, if a bass can make it to 15.0 inches, a size at which they can feed on the large and abundant gizzard shad in the lake, they have a good chance of survival past this category and into the greater than 20.0 inch range.



Parameter 5 – Numbers of 20.0 inch and larger bass

The electrofishing catch rate of 20.0 inch and larger largemouth bass has averaged 2.23 f/h since 1991, which is good for lakes of this size. Between 2006 and 2011 there have been between 1.00 and 4.00 fish greater than 20.0 inches per hour sampled, rating the lake as good for this category. In 2012, this number went through the roof (10.67 f/h) with a rating of excellent. It appears as though the higher numbers of fish in the greater than 15.0 inch range are surviving through to the greater than 20.0 inch range.



Overall – Total Assessment Score (All five parameters added together)

Overall, when compared to other lakes in Kentucky, the largemouth bass fishery at Wilgreen Lake has averaged a good score. In 1994, 1996 and 2012, the lake was rated as excellent and only one year dropped below good (2008). Overall, the lake is in a precarious situation with the introduction of gizzard shad. Continued sampling will tell the tale of this introduction. The question remains if the population will continue to be excellent in spite of the lowered numbers of age-1 and 12.0 – 14.9 inch fish. If the high numbers of greater than 15.0 and 20.0 inch fish is due to the high recruitment at age-1 in 2003 and 2005 translating into a higher population of 12.0 – 14.9 inch fish from 2005 – 2007 then the high numbers of these large fish could decline in the future. For now, though, the lake has an excellent chance of producing a trophy sized largemouth bass for any bass angler that settles on this lake.

